

Sound-meaning association biases evidenced across thousands of languages

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Abstract

It is widely assumed that one of the fundamental properties of spoken language is the arbitrary relation between sound and meaning. Some exceptions in the form of nonarbitrary associations have been documented in linguistics, cognitive science, and anthropology, but these studies only involved small subsets of the 6,000+ languages spoken in the world today. By analyzing word lists covering nearly two-thirds of the world's languages, we demonstrate that a considerable proportion of 100 basic vocabulary items carry strong associations with specific kinds of human speech sounds, occurring persistently across continents and linguistic lineages (linguistic families or isolates). Prominently among these relations, we find property words ("small" and i, "full" and p or b) and body part terms ("tongue" and l, "nose" and n). The areal and historical distribution of these associations suggests that they often emerge independently rather than being inherited or borrowed. Our results therefore have important implications for the language sciences, given that nonarbitrary associations have been proposed to play a critical role in the emergence of cross-modal mappings, the acquisition of language, and the evolution of our species' unique communication system.

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Keywords

Cognitive sciences, Iconicity, Language evolution, Linguistics, Sound symbolism